

Zasmidium oleae sp. nov. from China

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ABSTRACT—A new species, *Zasmidium oleae* on *Olea tsoongii* is described, illustrated and discussed. The type specimen is deposited in HMAS.

KEY WORDS—cercosporoid fungi, *Mycosphaerellaceae*, plant pathogen

Introduction

The genus *Zasmidium*, established by Fries (1849), was considered a monotypic genus until recently. Based on molecular sequence analyses, this genus is now used for cercosporoid fungi in the *Mycosphaerellaceae* morphologically characterized by verruculose superficial hyphae in vivo (rarely lacking); smooth to verruculose conidiophores; conspicuous, somewhat thickened and darkened, planate conidiogenous loci; and solitary or catenate conidia with thin to somewhat thickened, smooth to verruculose walls and somewhat thickened and darkened planate hila (Braun et al. 2013). *Zasmidium oleae*, a new species on *Olea tsoongii* collected in Hainan Province, China, is described, illustrated, and compared with other cercosporoid species on *Oleaceae*. The type specimen is deposited in the Herbarium Mycologium, Chinese Academy of Sciences, Beijing, China (HMAS).

Taxonomy

Zasmidium oleae Y.L. Guo, X.W. Xie & B.J. Li, sp. nov.

FIG. 1

FUNGAL NAME FN570159

Differs from *Passalora amurensis* by its shorter, smooth, 3-4-septate conidia.

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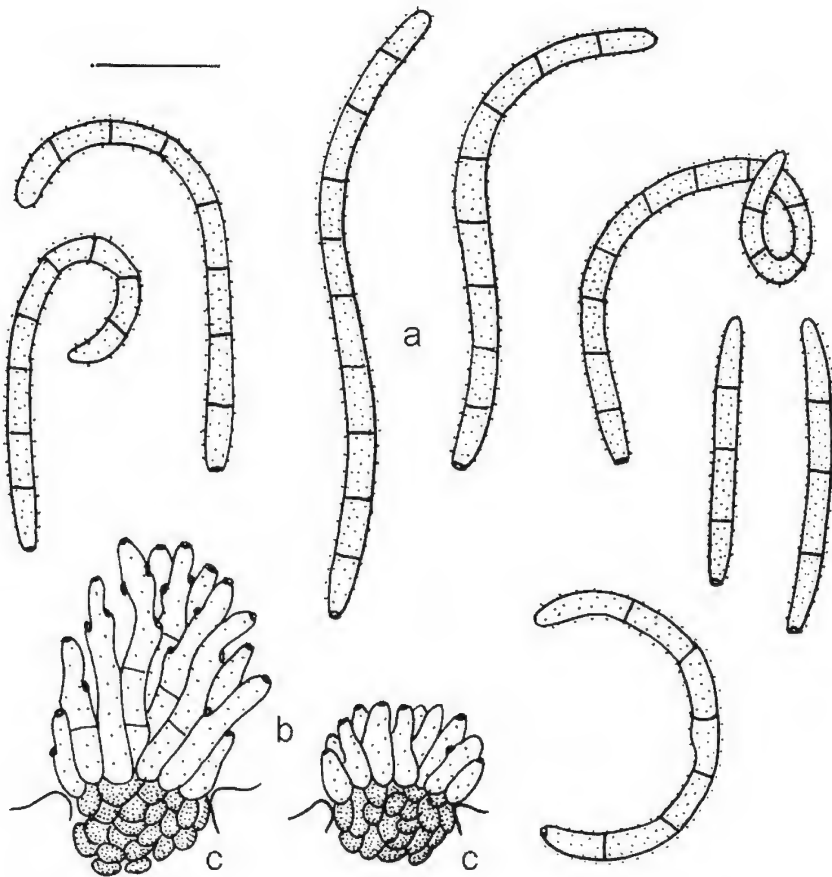


FIG. 1. *Zasmidium oleae* (HMAS 245707, holotype).
a. Conidia; b. Conidiophores; c. Stroma. Bar = 25 μ m.

TYPE: China, Hainan Province, Wanning, on living leaves of *Olea tsoongii* (Merr.) P.S. Green (*Oleaceae*), 10 April 2011, coll. Guo Ying-lan 380 (Holotype, HMAS 245707).

ETYMOLOGY: Derived from the host genus *Olea*.

Leaf spots amphigenous, circular to angular, 2–8 mm diam., often confluent, red-brown to dark brown with a yellow to pale olivaceous-brown halo on the upper surface, pale brown with yellow to pale olivaceous-brown halo on the lower surface. Caespituli mainly hypogenous. Mycelium internal. Stromata

substomatal, globose, pale brown to brown, 25–50 µm diam. Conidiophores densely fasciculate, pale olivaceous-brown to olivaceous-brown, uniform in color, irregular in width, straight to slightly curved, not branched, geniculate, thin-walled, smooth, conical to conically truncate at the apex, 0–2-septate, mostly aseptate, $6.7\text{--}20(-48) \times 4\text{--}5.3$ µm. Conidiogenous cells integrated, terminal or mostly reduced to conidiogenous cells, 6.7–20 µm long. Conidiogenous loci conspicuous, thickened, darkened, 1.3–2.5 µm wide. Conidia formed singly, cylindrical, brown, thick-walled, verruculose, straight to variously curved, rounded at the apex, rounded to short obconically truncate at the base, indistinctly 3- to multiseptate, $40\text{--}128 \times 4.0\text{--}5.8$ µm, hila thickened and darkened, 1.3–2.5 µm wide.

Discussion

Based on the description in Chupp (1954), *Cercospora lumbricoides* Turconi & Maffei on *Fraxinus* sp. (*Oleaceae*) is very similar to *Z. oleae* but differs by its brown, longer conidiophores ($30\text{--}60 \times 4\text{--}6$ µm) and longer conidia ($80\text{--}200 \times 4\text{--}6$ µm). However, the generic affinity of *C. lumbricoides* is quite unclear (the type material has not been traced and the species is known only from the original description) (Turconi & Maffei 1915).

Passalora amurensis (Ziling) H.D. Shin & U. Braun on *Syringa amurensis* Rupr. (*Oleaceae*), also morphologically similar to *Z. oleae*, differs in having pale olivaceous, 3–4-septate, shorter, and smooth conidia ($35\text{--}70 \times 4.0\text{--}5.5$ µm; Shin & Braun 1996).

Although superficial verruculose mycelium, common in most *Zasmidium* species, is lacking on *Olea tsoongii*, assignment of the new species to *Zasmidium* is nevertheless justified. Several comparable species with distinctly verruculose conidia have recently been allocated to *Zasmidium* based on molecular data that support their affinities to this genus.

Acknowledgments

This work was supported by the Project for Fundamental Research on Science and Technology, Ministry of Science and Technology of China (No. 2013FY110400); CAAS Agricultural Science and Technology Innovation Program and funded by Key Laboratory of Biology and Genetic Improvement of Horticultural Crops, Ministry of Agriculture, China. We are grateful to Dr. U. Braun and Prof. S.Y. Guo for reviewing the manuscript and to Ms. X.F. Zhu for inking the line drawing.

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